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First Named Inventor	Shunpei YAMAZAKI et al.
Group Art Unit	2894
Examiner Name	Alexander Belousov
Attorney Docket Number	0756-7752

ENCLOSURES (check all that apply)

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SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm or Individual name	Eric J. Robinson, Reg. No. 38,285 Robinson Intellectual Property Law Office, P.C. PMB 955 21010 Southbank Street Potomac Falls, VA 20165
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Signature

Date

October 29, 2008

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Attorney Docket No. 0756-7752

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:

Shunpei YAMAZAKI et al.

Serial No. 10/583,365

Filed: June 19, 2006

For: SEMICONDUCTOR DEVICE

) Group Art Unit: 2894

) Examiner: Alexander Belousov

) CERTIFICATE OF MAILING

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Adulm Stampen

RESPONSE

Honorable Commissioner of Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

The Official Action mailed July 29, 2008, has been received and its contents carefully noted. This response is filed within three months of the mailing date of the Official Action and therefore is believed to be timely without extension of time. Accordingly, the Applicant respectfully submits that this response is being timely filed.

The Applicant notes with appreciation the consideration of the Information Disclosure Statements filed on June 19, 2006; September 1, 2006; and March 14 2008.

Claims 1-14 are pending in the present application, of which claims 1-9 are independent. Claims 5-7 have been withdrawn from consideration by the Examiner. Accordingly, claims 1-4 and 8-14 are currently elected, of which claims 1-4, 8 and 9 are independent. For the reasons set forth in detail below, all claims are believed to be in condition for allowance. Favorable reconsideration is requested.

Paragraph 2 of the Official Action rejects claims 1-4 and 8-14 as obvious based on the combination of U.S. Patent No. 6,509,217 to Reddy and U.S. Publication No. 2001/0038127 to Yamazaki. The Applicant respectfully traverses the rejection because the Official Action has not made a *prima facie* case of obviousness.

As stated in MPEP §§ 2142-2143.01, to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some reason, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some reason to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. "The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art." In re Kotzab, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000). See also In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

The prior art, either alone or in combination, does not teach or suggest all the features of the independent claims. Furthermore, there is no proper or sufficient reason, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify Reddy and Yamazaki '127 or to combine reference teachings to achieve the claimed invention. MPEP § 2142 states that the examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. It is respectfully submitted that the Official Action has failed to carry this burden. While the Official Action relies on various teachings of the cited prior art to disclose aspects of the claimed invention and asserts that these aspects could be modified in the manner asserted in the Official Action, it is submitted that the Official Action does not adequately set forth why one of skill in the art would combine the references to achieve the features of the present invention.

Independent claim 1 recites "an insulating film over the conducting wire" and "fine particles of a soft magnetic material are included in the insulating film." Independent claims 2, 4 and 9 recite "a resin film over the conducting wire" and "fine particles of a soft magnetic material are included in the resin film." Independent claims 3 and 8 recite "a first insulating film covering the conducting wire" and "fine particles of a soft magnetic material are included in the second insulating film." As disclosed, for example, at page 4, lines 9-10, of the present specification, "[the] soft magnetic material is a magnetic material that has high permeability and small coercitivity." For the reasons provided below, Reddy and Yamazaki '127, either alone or in combination, do not teach or suggest the above-referenced features of the present invention; and there is no proper or sufficient reason, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify Reddy and Yamazaki '127 or to combine reference teachings to achieve the claimed invention.

In Reddy, aluminum is used as a conductive material. In Yamazaki '127, gold is used as a conductive material. However, the present claims are directed to soft magnetic material. The Applicant respectfully submits that the conductive materials of Reddy and Yamazaki '127 are patentably distinguished from the soft magnetic material of the present claims. The Official Action has not demonstrated why one of ordinary skill in the art at the time of the present invention would have necessarily had a reason to replace the conductive materials of Reddy or Yamazaki '127 (aluminum or gold) with a soft magnetic material.

Also, the Official Action relies on the antenna 88, antenna lead line 92 and (no label) 96 of Reddy to allegedly teach an antenna having a conductive wire, as presently claimed. The Official Action concedes that "Reddy does not disclose an insulating film [resin film or second insulating film] over the conductive wire, and fine particles of a soft magnetic material are included in the insulating film [resin film or second insulating film]" (e.g. pages 3-6, Paper No. 20080721). Also, Reddy teaches that contact metal,

typically aluminum, is used to fill via holes 108 and 110, which are formed over the antenna lead line 92 (column 17, lines 49-59).

Yamazaki does not cure the above-referenced deficiencies in Reddy. The Official Action asserts that "Yamazaki discloses in FIG. 4A ... an insulating film (215) and fine particles of a soft material (214; gold) are included in the insulating film [the resin film or the second insulating film]" (e.g. pages 3-6, Paper No. 20080721). The Official Action further asserts that it would have been obvious to "modify the device of Reddy with via 108/110 made of an insulating film and fine particles of a soft material" (Id.). That is, the Official Action appears to argue that it would have been obvious to replace the aluminum contact metal in via holes 108 and 110 of Reddy with the resin 215 having gold conductive particles 214 of Yamazaki '127. The Applicant respectfully disagrees and traverses the assertions in the Official Action.

As noted in MPEP § 2143.01, Part V, if a proposed modification renders the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. In re Gordon, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984). Also, as noted in MPEP § 2143.01, Part VI, if a proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. In re Ratti, 270 F.2d 810, 123 USPQ 349 (CCPA 1959). The Official Action appears to propose a modification of Reddy by removing the preferably aluminum contact metal in via holes 108 and 110 and replacing them with resin 215 having gold conductive particles 214. However, the Official Action has not set demonstrated why one of ordinary skill in the art at the time of the present invention would have had a reason to make this modification or whether Reddy would function properly after such modification. That is, the Examiner's proposed modification or combination of the prior art appears to change the principle of operation of the prior art invention being modified. Therefore, there is no suggestion or

motivation to make the proposed modification, and the teachings of the references are not sufficient to render the claims *prima facie* obvious.

Furthermore, the Official Action appears to concede that the gold conductive particles 214 of Yamazaki '127 are not magnetic and, without any teaching in the prior art of record, further asserts that it would have been obvious to replace the gold conductive particles with iron (e.g. pages 3-6, Id.). The Official Action asserts that the reason for such modification would somehow relate to a reduction in cost. The Applicant respectfully disagrees and traverses the assertions in the Official Action.

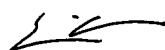
The Official Action has not demonstrated why a hypothetical concern over the cost of gold would necessarily lead one of ordinary skill in the art at the time of the present invention to replace Yamazaki's gold plated conductive particles 214 with iron. Also, the Official Action has not demonstrated that such modification would necessarily function in the manner intended by Yamazaki '127. Again, it appears that the proposed modification would negatively affect the underlying functions of the modified devices thus rendering the modified devices unsatisfactory for their original intended purposes.

Therefore, the Applicant respectfully submits that Reddy and Yamazaki '127, either alone or in combination, do not teach or suggest an insulating film, a resin film or a second insulating film over a conducting wire and fine particles of a soft magnetic material included in the insulating film, resin film or second insulating film. Also, the Official Action has not provided a proper or sufficient reason, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify Reddy and Yamazaki '127 or to combine reference teachings to achieve the claimed invention.

Since Reddy and Yamazaki '127 do not teach or suggest all the claim limitations and since there is insufficient reason to combine Reddy and Yamazaki '127, a *prima facie* case of obviousness cannot be maintained. Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. § 103(a) are in order and respectfully requested.

Should the Examiner believe that anything further would be desirable to place this application in better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,



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